Home Energy Scores in Eugene

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June 27, 2019
Low Income Energy Efficiency Workgroup
Overview

- Eugene at a glance
- Development of the Home Energy Score program for rentals
- Program results
- Next steps for Home Energy Score in Eugene
Eugene at a glance

- Population 166,000 (University of Oregon enrollment 23K)
- EWEB: public utility, provides electricity & water from the McKenzie River
- The Eugene community is relatively progressive, has historically valued conservation & stewardship
- Eugene passed a Climate Recovery Ordinance in 2014
- Eugene is facing a housing shortage*

* 2017 article by realtor.com: Eugene is the #2 most-constrained housing market, behind Seattle
Eugene’s Rental Housing

- Around half of housing units are rentals
- Thousands of rental properties still in need of energy upgrades*
- Renters often move into a home without any idea of what the utility costs will be
- Renters pay for energy efficiency in their rates, but often do not receive any benefits or services

* A 2017 study by the UO Business Consulting Group identified over 6000 Eugene rentals in need of upgrades. The housing shortage means landlords can rent properties easily, without making upgrades.
Rental Support in Eugene

- Offers consumption education, efficiency programs
- Rebates or 0% interest loans for energy & water efficiency improvements in rentals

- Offers many resources and services for renters
- Engages with broader community while integrating sustainability

City of Eugene
- Rental Housing Code protects health, safety & welfare of tenants
- Funds a variety of services for rentals

City of Portland
State of Oregon

Lane County
Rental Owners Association

City of Eugene
Home Energy Score in Oregon

2012: EWEB became a Home Energy Score Partner with U.S. Department of Energy (1st Partner in Oregon)

2016: State of Oregon defined how Home Energy Scores are to be used in Oregon

Info on single-page, with utility-specific pricing
Rental HES Program Development

- In 2016, EWEB partnered with UO’s Office of Sustainability and the City of Eugene
- The City pays student wages
- Students trained as State-approved Home Energy Assessors
- 18 assessors trained so far
Home Energy Score in Eugene

• Currently offering FREE Home Energy Scores for rental properties
• Owners or tenants can apply
• ~1-hour assessment
• Tenants and property owners receive a report, program info
Home Energy Score in Eugene

Score

Energy costs

Carbon footprint
Home Energy Score in Eugene

Score today: 3  
Score with improvements: 8

Estimated energy savings with improvements: $545 per year  
Estimated carbon reduction with improvements: 41%

Tackle Energy Waste Today!
Enjoy the rewards of a comfortable, energy efficient home that saves you money.  
- Get your home energy assessment (Done)
- Choose which energy upgrades to address first.
- Get a bid. Find an EWEB-participating contractor by visiting our list online at bit.ly/EWEBcontractor.
- Complete energy improvements. For eligible measures, EWEB may be able to offer a rebate or a 0% interest loan. For more details, visit eweb.org/saveenergy or call EWEB at 541-685-7088.

* Practical Energy Improvements - Complete Now or Later

To achieve the “score with improvements,” all recommended improvements listed below must be completed. Improvements likely will have a simple payback of ten years or less and may be eligible for EWEB funding and possible mortgage financing. For a more detailed explanation of costs and payment options, get a bid from a contractor.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Today’s Condition</th>
<th>Recommended Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attic insulation</td>
<td>R-9</td>
<td>Add insulation to R40 as space allows</td>
</tr>
<tr>
<td>Floor insulation</td>
<td>R-0</td>
<td>Insulate floors to R30 or as space allows</td>
</tr>
<tr>
<td>Wall insulation</td>
<td>R-7</td>
<td>Have the home professionally air sealed</td>
</tr>
<tr>
<td>Envelope Air Sealing</td>
<td>Not professionally air sealed</td>
<td>Install an efficient heat pump</td>
</tr>
<tr>
<td>Windows</td>
<td>Double-pane wood</td>
<td>Insulate exposed ducts to R11</td>
</tr>
<tr>
<td>Skylights</td>
<td>None</td>
<td>Have ducts tested for leaks &amp; seal if necessary</td>
</tr>
<tr>
<td>Heating system</td>
<td>Central, Forced Air</td>
<td>Install a heat pump</td>
</tr>
<tr>
<td>Cooling system</td>
<td>No cooling system</td>
<td>Visit bit.ly/EWEBwater for more info</td>
</tr>
<tr>
<td>Duct insulation</td>
<td>Not fully insulated</td>
<td></td>
</tr>
<tr>
<td>Duct sealing</td>
<td>Ducts not fully sealed</td>
<td></td>
</tr>
<tr>
<td>Water heater</td>
<td>Electric storage</td>
<td></td>
</tr>
<tr>
<td>Solar PV</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

The above energy improvements are recommended by EWEB to improve the score and lower the home’s carbon footprint. Some improvements may not be recommended by the U.S. Department of Energy due to costs, effectiveness, or fuel conversion issues. USDOE recommendations may be provided upon request.

Water Efficiency Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Today’s Condition</th>
<th>Recommended Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toilet flush rate(s) (gallons per flush)</td>
<td>Toilet #1 = 6 gpf; Toilet #2 = 1.6 gpf</td>
<td>Replace toilet(s) with water-efficient low-flow toilet(s) using 1.28 gpf or less.</td>
</tr>
<tr>
<td>Water leaks</td>
<td>Number of toilet leaks = 1; Number of non-toilet leaks = 1</td>
<td>Repair leaks. Consider upgrading your meter to an advanced meter with leak detection.</td>
</tr>
</tbody>
</table>

For more information about how EWEB can help with water efficiency improvements, visit bit.ly/EWEBwater.
Home Energy Score in Eugene

- Students conduct research on each home first
- Students visit homes in 2-person teams
- 5-15 assessments completed per week
Home Energy Score in Eugene
Home Energy Score in Eugene
Results

• 468 homes assessed since 2017

• Student assessors find the program beneficial
  – General satisfaction (80%) based on end-of-term surveys
  – 4 students returned again for second and third years

• Tenants find the program beneficial
  – 73% of assessments were initiated by tenants.
  – 89% agreed it “helped me understand my consumption” and “helped me determine the efficiency of my rental”
  – 100% agreed the information would help when choosing a rental
  – 33% discussed results with their landlord

• Some rental owners were motivated to take action
  – ~9% of rental owners made improvements, invested $188K+
  – 80% agreed it “helped me determine the efficiency of my rental”
  – Most rental owners could not make upgrades due to timing, cost, etc.
Results

A glance at the rental housing stock, taken from HES data.
Results

Average score = 4.1
Results

What measures were installed as a result of the Home Energy Score program?

EWEB contributed ~$30,000 in rebates, plus additional 0% interest loan funding, to help these measures get installed.
Program Evolution

• Collecting water efficiency data
  – Leaks, toilet flush rates
  – Results show new toilets have potential to save Eugene renters $2.3 million per year

• Using iPads to streamline process, collect photos, helps with QA

• Added a page to the report providing low-cost tips to lower your bills
Next Steps

• Publish scores online, to help renters as they shop for affordable housing
  • Earth Advantage’s Green Building Registry
  • PDF on eweb.org website

• HES to help with climate goals
  • Eugene’s revised Climate Action Plan (the CAP2.0) may include HES as one of the proposed actions

• Integrate a customer feedback survey
• Improve recruitment of new assessors
• Improve outreach
Thanks!

Questions?

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Extra slides

What EWEB provides to our customers along with the Score report
LOW-COST TIPS TO LOWER YOUR BILL

These actions can save you: $325

- **$45** Adjust your thermostat by two degrees. Turn it down in winter, up in summer. Dress for the season.
- **$45** Reduce your hot water use: (1) Take showers & not baths, (2) shorten showers, (3) wash clothes with cold water, (4) install low-flow shower heads and faucet aerators.
- **$45** Heat and cool a smaller space by closing off unused rooms & turn off the heating & cooling in those rooms.
- **$70** Get rid of your television.
- **$45** Replace your most commonly-used lights with LEDs.
- **$25** Unplug electronics when not in use. Avoid standby power use by unplugging devices or using smart power strips.
- **$60** Set your thermostat back at right or while you are away. Adjust manually, or use a programmable Tstat. (Mythbuster: It does not cost you more to get the space back to temperature.)

Total: $325 per year in potential savings

### OTHER WAYS TO MANAGE YOUR BILLS

<table>
<thead>
<tr>
<th>ACTION</th>
<th>POTENTIAL RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use a thermometer</td>
<td>Some energy savings</td>
</tr>
<tr>
<td>Reduce drafts</td>
<td>Better comfort, some savings</td>
</tr>
<tr>
<td>Limit your use of space heaters</td>
<td>Some energy savings</td>
</tr>
<tr>
<td>Lower water use to save on water and wastewater bills</td>
<td>Water &amp; wastewater savings</td>
</tr>
<tr>
<td>Monitor your consumption each month</td>
<td>Smarter consumption</td>
</tr>
</tbody>
</table>

For a reality check and better control, purchase a thermometer and check the space temperature before adjusting the thermostat.

Seal up gaps around windows and doors with weatherstripping or even towels. Close chimney damper between fires, or seal it off if not used. Avoid heating with a fireplace, they heat poorly and bring cold air into the house.

Electric space heaters can be expensive to run, costing around ten cents an hour.

Fix any water leaks, and limit irrigation or plant water-efficient plants.

Compare your actual energy bills with the estimates above. Your actual electricity bills were $688 over the last 12 months.
### 2019 Residential Customer Solutions Programs, Rebates and Loans

<table>
<thead>
<tr>
<th>Program</th>
<th>Rebates Available</th>
<th>Loans Available (0% interest)</th>
<th>Program Requirements</th>
</tr>
</thead>
</table>
| Ducted Heat Pump       | $1,000 in lieu of loan | Up to $12,000 for site-built homes  
Up to $7,000 for manufactured homes | EWEB customers eligible for loan OR rebate. Air-source heat pumps only. Learn more at [bit.ly/EWEBductedhp](http://bit.ly/EWEBductedhp) |
| Insulation             | $0.40/Sq. ft. of insulation, up to 50% of job cost in lieu of loan | Up to $4,000 | Home must have electric heat and be poorly insulated. EWEB customers eligible for loan OR rebate. Learn more at [bit.ly/EWEBwindowsinsul](http://bit.ly/EWEBwindowsinsul) |
| Windows                | $4.00/Sq. ft. of glass with U-factor ≤ 0.22 in lieu of loan | Up to $4,000 for U-factor ≤ 0.25  
Up to $6,000 for U-factor ≤ 0.22* | Home must have electric heat and have single pane wood windows, single pane metal windows, or double pane metal windows. EWEB customers eligible for loan OR rebate. Learn more at [bit.ly/EWEBwindowsinsul](http://bit.ly/EWEBwindowsinsul) |
| Heat Pump Water Heater | $400 for Tier 3 units in lieu of loan | N/A | Install a qualified heat pump water heater and submit the required documentation. Learn more at [bit.ly/EWEBhpwh](http://bit.ly/EWEBhpwh) |
| Solar Electric Net Metering | $0.40/AC output watt up to $2,500 | N/A | Site must have at least an 85% total solar resource fraction to receive rebate. 25 kW max. Direct generation option available in lieu of net meter. Power purchase agreement must be approved before install. Learn more at [eweb.org/solar](http://eweb.org/solar) |
| New Construction       | $1000 for a ducted or ductless heat pump  
$750 for a heat pump water heater  
$600 for a NEEM certified manufactured home | N/A | EWEB encourages homes to be built with efficient low-carbon electric heating and water heating systems. Custom rebates may be available as well. Learn more at [bit.ly/EWEBnewconst](http://bit.ly/EWEBnewconst) |

* See program information sheet on website for details on window performance requirements.

1. All rebates and loans require that the homeowner submit an application. For most programs, apply online at [https://secure.eweb.org/ProgramApp.aspx](https://secure.eweb.org/ProgramApp.aspx).
2. Program restrictions may apply. Rebate and loan amounts are subject to change at any time. Please contact EWEB at 541-685-7088 for the most current program information.
3. Loan funding may be used to cover costs of labor from participating contractors. See lists of contractors online at [bit.ly/EWEBcontractor](http://bit.ly/EWEBcontractor).
4. Information about all of EWEB’s rebate and loan offerings can be found at [http://www.eweb.org/saveenergy](http://www.eweb.org/saveenergy).
5. Aggregate loan limit is $20,000 per customer. The term for an EWEB loan is 48 months when borrowing under $5,000, or 60 months when borrowing $5,000 or more.
## 2019 Residential Customer Solutions Programs, Rebates and Loans

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</tr>
</thead>
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<tr>
<td><strong>EWEB Greenpower</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>Support clean energy &amp; encourage renewable energy projects in our community by assigning 100% of your electricity to Greenpower, or choosing blocks of Greenpower for as little as $1.50 per month. Learn more at eweb.org/greenpower</td>
</tr>
<tr>
<td><strong>Electric Vehicles</strong></td>
<td>$300</td>
<td>N/A</td>
<td>Enjoy lower fuel costs, lower maintenance costs, lower emissions, and an exciting driving experience by upgrading to an electric vehicle. See qualification details and additional information at eweb.org/ev</td>
</tr>
<tr>
<td><strong>Home Energy Score</strong></td>
<td>FREE</td>
<td>N/A</td>
<td>For rentals and limited income households only. Receive a FREE home energy assessment and report. Tenants are welcome to apply. Apply before June. Learn more and apply online at eweb.org/rentalresources</td>
</tr>
<tr>
<td><strong>Backup Generator</strong></td>
<td>N/A</td>
<td>Up to $2,000</td>
<td>Installation must include a transfer switch and be permitted. Applicant must be an EWEB electric customer and be the owner of the property. Learn more at eweb.org/generatorloan</td>
</tr>
<tr>
<td><strong>Toilets</strong></td>
<td>$50 bill credit per toilet</td>
<td>N/A</td>
<td>New toilet must be WaterSense and use 1 gallon per flush or less and must replace an existing toilet using 1.6 gallons per flush or more. Learn more at eweb.org/waterconservation</td>
</tr>
<tr>
<td><strong>Hand Valve</strong></td>
<td>Free valve (or $75 bill credit) and $75 bill credit for installation</td>
<td>N/A</td>
<td>Shut-off valve to be installed on customer side of water meter by a plumber. Valves may be provided by plumber or EWEB. Learn more at eweb.org/waterconservation</td>
</tr>
<tr>
<td><strong>Water Service Line Replacement</strong></td>
<td>N/A</td>
<td>Up to $5,000</td>
<td>Replacement of a leaking water service line between the meter and the house only. Must be done by a qualifying plumber. Learn more at eweb.org/leakassistance</td>
</tr>
<tr>
<td><strong>Septic</strong></td>
<td>$250 to inspect and pump out septic system</td>
<td>Up to $10,000 for repair or replacement of septic system</td>
<td>Property must be within the McKenzie River Puro Water Partners Boundary. Learn more at eweb.org/septic</td>
</tr>
<tr>
<td><strong>Electric Service Upgrade</strong></td>
<td>N/A</td>
<td>Up to $20,000</td>
<td>Property must be in EWEB electric service territory. Examples include electric panel or meter base replacement, underground service work, or new services. Learn more at eweb.org/service-upgrade</td>
</tr>
</tbody>
</table>
Plus a recent bonus in 2019:

Additional $100 rebate
On Heat Pumps, Windows, Insulation and More

Rental property owners:
Apply for an EWEB efficiency rebate within 45 days of this report and you can take advantage of an extra incentive to upgrade your property.

Property Owner Special Offer